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(54) PHOTOCATALYST, ITS PRODUCTION AND DECOMPOSING AND REMOVING METHOD OF HARMFUL SUBSTANCE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a photocatalyst having high photocatalytic activity which can maintain its activity under calcination conditions in a wide temp. range from low temp. to high temp. during preparation, and to provide its producing method and to provide a decomposing and removing method of org. substances by using this photocatalyst.

SOLUTION: This photocatalyst consists of titanium dioxide particles with dispersion of an oxide of at least one kind of metal selected from strontium, hafnium, zinc, boron, magnesium and barium. By bringing harmful substance into contact with the photocatalyst and irradiating the photocatalyst with high energy light, the photocatalyst is effective to decompose and remove the harmful substances. The photocatalyst is obtd. by bringing titanium dioxide or its precursor into contact with an oxide of at least one kind of metal selected from metals above described or its precursor, and then calcining the product at 250 to 800°C. The obtd. photocatalyst can be fixed to various materials (supporting bodies) such as metal materials, ceramics, porcelains, glass, resin, wood, and activated carbon.

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